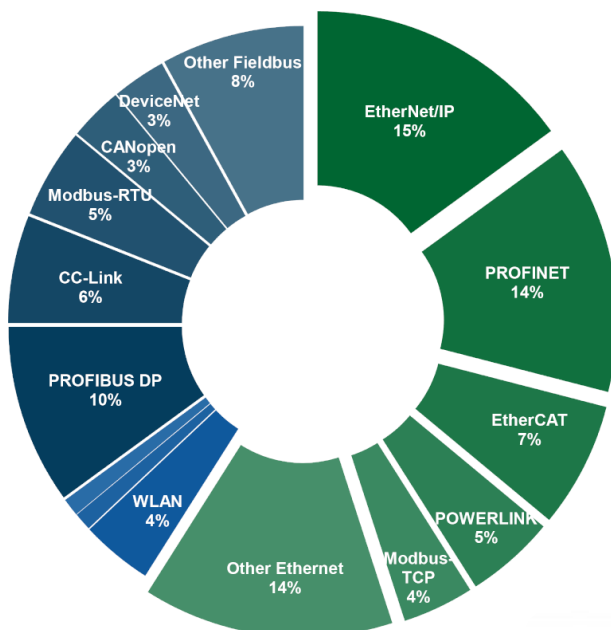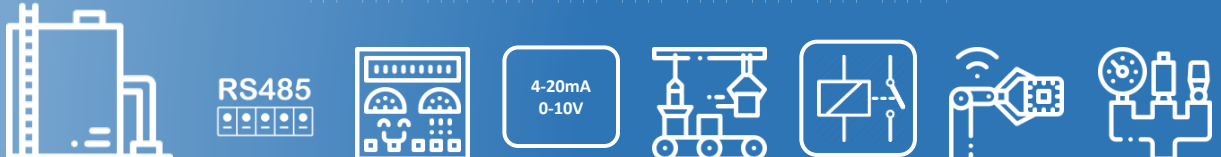# IoT for Manufacturing & Production

RS485

4-20mA
0-10V

The industrial manufacturing sector has been one of the earliest adopters of automated communications between machines, because of which numerous open and proprietary standards have evolved over time. Among them analog signaling protocols over current or voltage differentials have limited range while digital protocols have limited scalability. Industrial IoT bridges this interoperability challenge between the operating machinery and the IT centric manufacturing execution systems (MES) . Additionally IoT systems address the range and scalability issues, even making it possible to publish necessary data over the Internet for remote consumption.

The incorporation of IoT based systems in manufacturing shop floors has enabled improved traceability throughout the production and supply chain. Components can now be tracked using AI powered vision systems and etched bar codes to optimize mainline assembly as well as rework lines. This data is used extensively by industrial robots. Furthermore raw materials and finished product can also be traced to the point of sale by using IoT systems.

Capsule Labs is founded by IoT industry veterans and offers foundational IoT projects to develop a better understanding of IoT solution.